



MEngSc Food Engineering UCD School of Biosystems Engineering



Why is this course for me?

The MEngSc in Food Engineering provides a comprehensive coverage of bioprocess and food manufacturing systems engineering. The programme will be of particular interest to graduates in Engineering, Science and related disciplines who are interested in food and bioprocess engineering, risk assessment, process development, process control, advanced manufacturing systems and associated environmental issues. You will develop new technical competencies in food and bioprocess engineering,

learn how to develop and execute a research plan and acquire skills in the application of leading edge technologies to the agri-food and biotechnology industries, including novel food processing technology, food process automation, risk assessment, computer vision for food quality and food safety. Excellent job prospects are available to graduates in the food, bioprocess, manufacturing and related agencies and industries.

Why study at University College Dublin?

Some of the reasons to study at UCD:

- Top 1% world university
- Ireland's largest provider of graduate education
- Ireland's largest and most international university
- Emphasis on research and innovation
- Safe, modern campus in Dublin, capital city of Ireland
- Extensive range of on-campus accommodation

UCD College of Engineering and Architecture

The UCD College of Engineering and Architecture's research and taught programmes are centred around a wide variety of activities spanning basic, strategic and applied research from the diverse range of disciplines covered by the Schools of Architecture, Biosystems Engineering; Chemical and Bioprocess Engineering; Civil, Structural and Environmental Engineering; Electrical, Electronic and Communications Engineering and Mechanical and Materials Engineering.

We have a proud history in research going back 100 years. Today, there are exciting opportunities for those wishing to pursue a higher research degree to doctoral or masters level. Within the broad disciplines listed above there are many research centres, clusters and institutes lead by highly experienced world renowned researchers.

The College has an excellent track record in attracting significant Science Foundation Ireland (SFI), European and industrial funding to support its many research activities. Through research, the UCD College of Engineering and Architecture will continue to promote excellence in Graduate training. The range of interdisciplinary taught Master's programmes now available within the college and initiatives including the Structured and Thematic PhD programmes, mean that the Graduate School is ideally placed to offer innovative graduate level training programmes.

UCD School of Biosystems Engineering

Biosystems Engineering is the application of engineering principles to agriculture, food and renewable resources while at the same time protecting the environment.

Our interests are diverse and include food processing, agricultural production systems, renewable resources, biofuels, environmental protection. The common theme is to apply engineering principles in all of these areas.

We offer a range of postgraduate programmes, details of which are accessible from the website. We have an active research community of postgraduate and postdoctoral researchers and this website provides updated information on the research opportunities available at postgraduate and postdoctoral level.

What will I study?

Students attain a multitude of experiences facilitated through lectures, tutorials, hands on laboratory practicals and individual/team projects.

Topics include:

- Bioprocess Engineering Principles
- Food Chain Integrity
- Advanced Food Refrigeration Systems
- Waste to Energy
- Life Cycle Assessment
- Global Cold Chain Safety
- Quantitative Risk Assessment for Human and Animal Health
- Unit Operations in Bioprocess Engineering
- Advanced Food Process Engineering
- Thesis

What are the career opportunities?

The manufacture of food and drink products is Ireland's most important indigenous industry with a turnover approaching €24 billion.

Almost 50,000 people are directly employed in the food and drink sector with a further 60,000 employed indirectly in all regions of the country. The industry also uses 90% of the output of Ireland's 120,000 farmers.

The industry accounts for €8.7bn or half of all purchases of Irish goods and services by manufacturing industry.

The relative importance of the food and drink sector to Ireland is greater than almost all other EU countries with the highest GVA per employee in the EU and one of the highest turnovers per capita.

The value of food and drink exports in 2012 reached €9 billion.

Excellent job prospects are available to graduates in the food, bioprocess, manufacturing and related agencies and industries in Ireland.

Graduates have progressed to career opportunities in a broad range of internationally recognised companies including Glanbia, Képac, Coca Cola, Guinness, Kerry group, APV, MC O'Sullivan, ALcontrol Laboratories.



Entry Qualifications

Applicants must hold an honours standard in a relevant Engineering, Science or Technology degree from a recognised higher education institution. If English is not your native language, proof of your proficiency in English will be required, unless you took your primary degree through English in an English speaking country. The minimum acceptable score on the TOEFL Internet Based Test is 100 and on IELTS it is 6.5

Duration

This MEngSc is a one year full time, 12 month programme, comprising 90 credits

Contact

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Applying Online

To apply online, please go to www.ucd.ie/apply, create a user account, select 'Graduate Taught Courses' as your application type from the drop down list and then select 'MEngSc Food Engineering (X082)'

Useful Links

www.ucd.ie/programmes/X082
www.ucd.ie/graduatestudies/coursefinder/

Academic Profile



Prof Francis Butler,
Head of the UCD
School of
Biosystems
Engineering

Prof Francis Butler is Head of the UCD School of Biosystems Engineering. His current area of research is in food engineering with particular interest in quantitative risk assessment of hazards in food; traceability of foods; rheological characterisation of foods; refrigeration, novel processing and packaging of foods. Since joining UCD, he has secured €5 million in competitively won research funding for over 30 research projects.